



STATE OF CALIFORNIA
Bid Specification
Fluorescent Lamps
Department of General Services

6240-05BS-001

1.0 SCOPE

This specification describes the requirements for T12, T8, compact and other replacement fluorescent lamps to be used in State buildings.

2.0 SPECIFICATIONS AND STANDARDS

Specifications and standards referenced in this document in effect on the opening of the Invitation for Bid forms a part of this specification where referenced. All applicable ANSI, IES, and NEMA standards in effect at the time of bid opening shall apply. All lamp performance specifications shall be measured in accordance with these standards.

All references to the amount of mercury (Hg) found in fluorescent lamps identifies the maximum amount of mercury the state would expect to find in any one lamp. If a lamp manufacturer provides a range of mercury content due to the manufacturing process, the state will use the maximum amount from the range provided as the set amount of mercury the state would expect to find in any one lamp.

3.0 REQUIREMENTS

All fluorescent lamps offered shall be compliant with the U.S. EPA Toxicity Characteristic Leaching Procedure (TCLP). Fluorescent lamps meeting TCLP shall be divided into the following two categories. Category 2 shall be divided into the following three groups.

Category	Group	Description
1		T 12 Fluorescent Lamps
2	2 A	T 8 Fluorescent Lamps
	2 B	Compact Fluorescent Lamps (CFL)
	2 C	All Other Fluorescent Lamps

3.1 T 12 Fluorescent Lamps (Category 1)

The following table identifies three classes of T 12 fluorescent lamps that fall into this category. Suppliers must offer lamps from a manufacturer capable of providing one or more lamps from each of the following three classes. T 12 fluorescent lamps in this category shall meet or exceed the following requirements.

NEMA Class	Tube Type	Minimum Color Rendering Index (CRI)	Minimum Rated Lamp Life (See Note 1)	Maximum Hg Content
34W/48T12/G13/RS	Straight	70	20,000 hours	10 mg
60W/96T12/Fa8/IS	Straight	70	12,000 hours	10 mg
34W/22T12/U6/2G13/RS	U-Bend	70	18,000 hours	10 mg

Note 1: Minimum rated lamp life is based on 3 hr/start cycle testing with a 0.9 magnetic rapid start ballast. However, minimum rated lamp life for single pin (Fa8) base lamps is based on 3 hr/start cycle testing with a 0.9 electronic instant start ballast.

All other T 12 fluorescent lamps that are TCLP compliant (including pre-heat, all high output, and straight fluorescent lamps other than 48 and 96 inches) fall into the “All Other Fluorescent Lamps” group 2C below.

3.2 **T 8 Fluorescent Lamps (Category 2, Group 2A)**

The following table identifies four lamp classes of T 8 fluorescent lamps that fall into this category and group. Suppliers must offer lamps from a manufacturer capable of providing one or more lamps from each of the following four lamp classes. T 8 lamps in this category and group shall meet or exceed the following requirements.

NEMA Lamp Class	Tube Type	Minimum Color Rendering Index (CRI)	Minimum Rated Lamp Life (See Note 2)	Maximum Hg Content
32W/48T8/G13/IS	Straight	80	18,000 hours	5 mg
59W/96T8/Fa8/IS	Straight	80	18,000 hours	10 mg
31W/22T8/U1/2G13/IS	U-Bend	80	18,000 hours	10 mg
32W/22T8/U6/2G13/IS	U-Bend	80	18,000 hours	10 mg

Note 2: Minimum rated lamp life is based on 3 hr/start cycle testing with a 0.9 electronic instant start ballast.

All other T 8 fluorescent lamps that are TCLP compliant (including pre-heat, all high output, and straight fluorescent lamps other than 48 and 96 inches) fall into the “All Other Fluorescent Lamps” group 2C below.

3.3 **Compact Fluorescent Lamps (CFL) (Category 2, Group 2B)**

All CFLs shall contain no more than 5 mg Hg. All self-ballasted CFLs shall be Energy Star qualified. Suppliers must offer lamps from a manufacturer capable of providing 2-pin and 4-pin CFLs as well as straight tube and twist tube type self-ballasted CFLs.

3.4 **All Other Fluorescent Lamps (Category 2, Group 2C)**

All other fluorescent lamps that are TCLP compliant which were not previously identified in category 1 and category 2, group 2A, shall fall into this group. Examples include, but are not limited to, the following:

- T 5 fluorescent lamps
- All circular fluorescent lamps
- All high output fluorescent lamps (regardless of length)
- Pre-heat T 8 and T 12 fluorescent lamps (regardless of length)
- T 12 straight fluorescent lamps other than 48 and 96 inches in length
- T 8 straight fluorescent lamps other than 48 and 96 inches in length